CAPACITY, MANAGEMENT, OPERATIONS AND MAINTENANCE (CMOM) PLAN

Greater New Haven Water Pollution Control Authority

GNHWPCA
260 East Street
New Haven, CT 06511

Final Draft

Prepared by:

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March 8, 2011

ABLE ENGINEERING, LLC

Bruce J. Kirkland, P.E.
Consulting Engineer

March 8, 2011

Mr. Gary Zrelak
Director of Operations
GNHWPCA
260 East Street
New Haven, CT 06511

Re: Capacity, Management, Operations and Maintenance (CMOM) Plan

Dear Mr. Zrelak,

Able Engineering, LLC is pleased to provide this CMOM Plan for the GNHWPCA wastewater collection system. This CMOM Plan has been developed to;

- Provide efficient and effective collection system operation and maintenance while protecting public health and the environment
- Meet all of the regulatory requirements of the Connecticut Department of Environmental Protection (DEP) and the United States Environmental Protection Agency (EPA)
- Build on the 2008 CMOM Assessment and Corrective Action Plan by;
    - Summarizing the assessment findings
    - Prioritizing the action items

This CMOM Plan includes a proactive Preventative Maintenance Program that addresses;

- Reassessment of the current Maintenance Program which includes;
    - Cleaning all gravity sewers to remove fats, oils and grease, roots, and sediment on a three year rotating basis
    - Identifying and cleaning hot spot gravity sewers to remove fats, oils and grease, roots, and sediment on a more frequent basis
    - Removing blockages reported in gravity sewers immediately

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Development of a proactive Preventative Maintenance Program that includes;

- Inspection of all manholes and gravity sewers to document maintenance issues, structural condition, and the potential for excessive infiltration and inflow on a prioritized basis
- Assessment of the inspection data to identify problem gravity sewers
- Cleaning problem manholes and problem gravity sewers to remove fats, oils and grease, roots, and sediment
- Television inspection of problem gravity sewers to document maintenance issues, structural condition, and the potential for excessive infiltration and inflow
- Assessment of the problem manhole and problem gravity sewer inspection data to develop rehabilitation or replacement recommendations to correct operational problems, correct structural deficiencies, and remove excessive infiltration and inflow
- Assessment of all manhole and gravity sewer inspection data to develop preventative maintenance schedules

This CMOM Plan also includes an Overflow Emergency Response Plan that includes;

- Overflow response procedures and standard protocols that minimize risk and protect the public health and the environment
- Overflow notification procedures that identify who needs to be notified (depending on the nature of the overflow) and how to contact those individuals or agencies
- Overflow reporting procedures that identify which agencies receive reports (depending on the nature of the overflow), the timing of the reports, and the contact information

Able Engineering, LLC appreciates this opportunity to prepare this CMOM Plan for the GNHWPCA. Should you have any questions or require any additional information, please do not hesitate to contact me.

Very truly yours,
ABLE ENGINEERING, LLC

Bruce J. Kirkland, P.E.
Consulting Engineer

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY
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MARCH 8, 2011

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CMOM PLAN GOALS

- The Authority has developed this CMOM Plan to;
  - Provide efficient and effective collection system operation and maintenance while protecting public health and the environment
  - Meet all of the regulatory requirements of the Connecticut Department of Environmental Protection (DEP) and the United States Environmental Protection Agency (EPA)
  - Build on the 2008 CMOM Assessment and Corrective Action Plan by;
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CMOM PLAN APPROACH

The Authority and their consultant, Able Engineering, LLC, completed the following tasks in support of development of this CMOM Plan.

- Reviewed the 2008 CMOM Assessment and Corrective Action Plan to;
    - Understand the Authority's current practices and performance relative to the CMOM requirements for the combined sewer collection system in New Haven, the sanitary sewer collection systems in East Haven, Hamden and Woodbridge (Member Municipalities) and portions of the sanitary sewer systems in North Haven and North Branford (via interlocal agreements)
    - Understand the action items that were identified that will allow the Authority to improve its performance
- Reviewed the Agreement with OMI to;
    - Understand OMI's current maintenance management program that includes preventative, proactive and corrective maintenance for the collection system
    - Understand OMI's performance and reporting requirements for the collection system
    - Understand OMI's coordination with Authority staff in day-to-day operation and maintenance of the collection system
- Reviewed OMI's Emergency Overflow Response Plan to understand current practices
- Reviewed the document which discusses establishment of a Stormwater Authority within the City of New Haven to;
    - Understand the City's current and proposed practices relative to catch basin cleaning and street sweeping
- Reviewed the 2001 Long Term Combined Sewer Overflow (CSO) Control Plan to;
    - Understand the characterization and the condition assessments of the combined sewer system in New Haven
    - Understand the implementation schedule of proposed capital improvement projects in the collection system
- Reviewed OMI's Large Diameter Sewer Evaluation
- Reviewed OMI's monthly collection system reports from 2010 and annual reports from 2008 and 2009
- Reviewed subarea sewer system mapping and geographic information system (GIS) data

- Reviewed the 2003 New England Interstate Water Pollution Control Commission Report entitled Optimizing Operation, Maintenance, and Rehabilitation of Sanitary Sewer Collection Systems to;
    - Understand how other utilities have addressed CMOM Plan discussion points in their collection systems
- Reviewed the 2009 EPA Region 1 Template for Developing Sewer Collection System Preventative Maintenance and Sewer Overflow Response Plans to;
    - Understand how other utilities have addressed CMOM Plan discussion points in their collection systems

CMOM PLAN ACTION ITEMS

Action items that were included in the 2008 CMOM Assessment and Corrective Action Plan are listed in order of priority based on discussions with the Authority. Priority action items to be initiated as part of the proactive Preventative Maintenance Plan and the Overflow Emergency Response Plan are included in Appendices A and B, respectively. The action items that have been initiated since 2008 are listed in the first group below. Action items that will be initiated at a future date are listed in the second group.

ACTION ITEMS THAT HAVE BEEN INITIATED SINCE 2008

- **REGULATOR AND TIDE GATE INSPECTION AND ASSESSMENT**
    - Regulators are inspected once per month on a dry day and after each significant rain event (more than 0.25 inches in 24 hours)
    - Wooden blocks are used to determine if regulators activated
    - A program to prioritize regulator inspections based on block program data and maintenance history could be developed
    - Most tide gates have been replaced by "duck bills" which require less maintenance
    - "Duck bills" are inspected as necessary
    - The Authority should assess the effectiveness of this program on a regular basis
- **FORCE MAIN AND SIPHON CLEANING**
    - Siphons are cleaned on a regular basis
    - A program to prioritize siphon cleaning based on maintenance history could be developed
    - Force mains, which require less maintenance, are cleaned as necessary
    - Cathodic protection systems are maintained on a regular basis
    - The Authority should assess the effectiveness of this program on a regular basis
- **EASEMENT ACCESS**

- The Authority has initiated a program to clear easements to provide access to sewer manholes
- Sewer manholes will be repaired, raised to grade and permanently marked as required
- Gravity sewers above grade in wetland areas, on bridge crossings and within culverts should be inspected following each significant rain event (more than 0.25 inches in 24 hours)
- Debris upstream of gravity sewers should be removed as required
- The Authority should assess the effectiveness of this program on a regular basis

- **FOG PROGRAM**

  - The Authority has increased educational outreach efforts for the FOG program by utilizing their new website
  - A program to prioritize educational outreach efforts for restaurants, condominium, and apartments in high maintenance areas could be developed
  - The Authority should assess the effectiveness of this program on a regular basis

- **PUMP STATION INSPECTION AND ASSESSMENT**

  - The Authority inspects pump stations on a regular basis
  - Condition assessment methodology
    - Complete forms
      - Electronic control systems
      - Electrical loads and equipment
      - Mechanical equipment
      - Structural condition
    - Enter data in the computerized management and maintenance system (CMMS)
    - Develop pump station rehabilitation and replacement projects
  - The Authority should assess the effectiveness of this program on a regular basis

- **SYSTEM MAPPING**

  - The GIS database is updated by the Authority on a regular basis
  - Master sewer maps are updated by the Authority on a regular basis
  - Call Before You Dig field mark outs are provided by the Authority based on system mapping data

- **INFORMATION MANAGEMENT SYSTEM**

  - The Authority has implemented a new CMMS
  - Maintenance and repair history is currently tracked using the CMMS

- Historical data in CitiWorks is being transferred to the new CMMS
- Basement backup and manhole flooding history is recorded in the CMMS
- The Authority could record odor complaint data in the CMMS
- Complaint management is handled via an emergency service request/work order system

- **CUSTOMER SERVICE**

  - The Authority has implemented a new customer information system (CIS) which details a customer service policy and customer service responsiveness

- **COLLECTION SYSTEM MAINTENANCE EQUIPMENT**

  - The Authority owns the vehicles and equipment that is used by OMI to maintain the collection system
  - OMI maintains the vehicles and equipment
  - The work order system in the CMMS is used to schedule and record collection system maintenance equipment activities

- **VEHICLE AND EQUIPMENT SPARE PARTS INVENTORY**

  - The Authority maintains an inventory of spare parts in the CMMS system

- **CAPACITY ASSESSMENT**

  - Flow monitoring in New Haven was completed as a part of the Long Term CSO Control Plan
  - Hydraulic modeling in New Haven was completed as a part of the Long Term CSO Control Plan
  - Flow monitoring in Hamden and East Haven was completed as part of the I/I studies in those communities
  - Developers are required to collect flow metering data and provide it to the Authority for review prior to connecting flows in excess of 2,000 gallons per day to the sewer system
  - The Authority has collected flow metering data in 59 area via this program since 2006

- **TRACKING SSOS**

  - There are no structural SSOs in the collection system
  - Non-structural SSOs (manhole flooding and basement backups) are recorded, documented, and reported to DEP
  - Causes of SSOs and volume estimates are also recorded

- **ENGINEERING STANDARDS**

    - Design specifications are in place
    - Construction inspection written procedures have been developed

- **SEWER USE ORDINANCE**

    - The Authority has a Sewer Use Ordinance in place
    - The Sewer Use Ordinance prohibits illicit discharges (sump pumps, roof leaders and private drains) to the sewer system
    - The Authority has interlocal agreements in place with North Haven and North Branford which require compliance with the Authority's Sewer Use Ordinance

- **BUDGETING**

    - Sewer collection system O&M budgeting is based on historical expense levels
    - Rate studies are performed regularly

- **ORGANIZATIONAL STRUCTURE**

    - The Authority has a comprehensive Agreement in place with OMI which provides for operation, management and maintenance of the collection system
    - The Authority has an up to date organizational chart in place which shows OMI's coordination with Authority staff in day-to-day operation and maintenance of the collection system
    - Collection system job descriptions are in place

- **INTERNAL COMMUNICATIONS**

    - Scheduling of O&M tasks are coordinated at daily meetings
    - Annual employee performance reviews are completed by OMI supervisors
    - The Authority has put a system in place for recording institutional knowledge in the CMMS

- **TRAINING**

    - Technical training is provided to Authority and OMI staff by OMI on an annual basis
    - Collection system certifications are documented by OMI and reported annually

- **SAFETY**

- Safety equipment and procedures are in place through the OMI Agreement
- The Authority has implemented a program that will include its staff

ACTION ITEMS TO BE INITIATED AT A LATER DATE

- **CATCH BASIN CLEANING AND STREET SWEEPING**
  - The Authority should continue to coordinate with the City of New Haven relative to catch basin cleaning and street sweeping in combined sewer areas
  - The City should conduct catch basin cleaning in accordance with DEP Guidelines
    - DEP Guidelines advise municipalities that Best Management Practices for catch basin cleaning include cleaning all catch basins at least once per year and identifying and prioritizing catch basins that require more frequent cleaning
  - The City should conduct street sweeping in accordance with DEP Guidelines
    - DEP Guidelines advise municipalities that Best Management Practices for street sweeping include conducting street sweeping as soon as possible after the years final snow melt to remove road sand in combined sewer areas

- **HYDROGEN SULFIDE MONITORING AND CONTROL**
  - The Authority could develop a comprehensive monitoring program to identify concrete sewers and manholes subject to corrosion by hydrogen sulfide
  - Prioritization for internal manhole or "camera on a stick" inspections
    - Pipe material and age
    - Critical assets
    - Drop manholes
    - Force main discharges
    - Odor complaints
  - Methodology for manhole and gravity sewer inspections
    - Complete inspection forms
    - Digital photographs
    - PACP ratings
      - Structural
      - Maintenance
      - I/I
    - Enter data in CMMS
    - Monitor problem areas
  - Hydrogen sulfide monitoring methodology
    - Collect data
      - Flow
      - pH

        - ORP
        - Temperature
        - Hydrogen sulfide concentration
    - Enter data into CMMS
    - Develop gravity sewer and manhole rehabilitation and replacement projects
    - Develop a chemical addition program to control hydrogen sulfide concentrations
    - Develop preventative maintenance schedules for future hydrogen sulfide monitoring
  - Assess effectiveness

- **BUILDING INSPECTIONS, SMOKE TESTING AND DYE TESTING**

  - The Authority has developed a comprehensive illicit discharge identification program including building inspection, smoke testing and dye testing, as a part of the following investigations
    - Long Term CSO Control Plan
    - I/I Studies
    - Sewer System Evaluation Surveys
  - Condition assessment methodology
    - Complete inspection forms
    - Digital photographs
    - Enter data in CMMS
    - Develop public and private inflow removal projects
  - Assess effectiveness

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY
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APPENDIX A
PREVENTATIVE MAINTENANCE PLAN
MARCH 8, 2011

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY
CAPACITY, MANAGEMENT, OPERATIONS AND MANAGEMENT PLAN

APPENDIX A
PREVENTATIVE MAINTENANCE PLAN
MARCH 8, 2011

PREVENTATIVE MAINTENANCE PLAN GOALS

- This Preventative Maintenance Plan addresses;
  - Reassessment of the current Maintenance Program which includes;
    - Cleaning all gravity sewers to remove fats, oils and grease, roots, and sediment on a three year rotating basis
    - Identifying and cleaning hot spot gravity sewers to remove fats, oils and grease, roots, and sediment on a more frequent basis
    - Removing blockages reported in gravity sewers immediately
  - Development of a proactive Preventative Maintenance Program that includes;
    - Inspection of all manholes and gravity sewers to document maintenance issues, structural condition, and the potential for excessive infiltration and inflow on a prioritized basis
    - Assessment of the inspection data to identify problem gravity sewers
    - Cleaning problem manholes and problem gravity sewers to remove fats, oils and grease, roots, and sediment
    - Television inspection of problem gravity sewers to document maintenance issues, structural condition, and the potential for excessive infiltration and inflow
    - Assessment of the problem manhole and problem gravity sewer inspection data to develop rehabilitation or replacement recommendations to correct operational problems, correct structural deficiencies, and remove excessive infiltration and inflow
    - Assessment of all manhole and gravity sewer inspection data to develop preventative maintenance schedules

PREVENTATIVE MAINTENANCE PROGRAM

MANHOLE AND GRAVITY SEWER CONDITION ASSESSMENT

- Establish sewer system subareas using the Authority's computerized management and maintenance system (CMMS), sewer mapping and geographic information system (GIS) database

- Prioritize sewer system subareas to complete inspection of all manholes and gravity sewers based on;
    - Critical assets (large diameter gravity sewers, location of gravity sewers, and water resources impacted by overflows)
    - Manhole flooding and basement backup history in sanitary and separated sewer areas
    - Combined sewer overflow history in combined sewer areas
    - Manhole and gravity sewer maintenance and repair history
    - Manhole and gravity sewer material and age
    - Combined, separated or sanitary sewer areas
    - Municipality
    - Coordination with Long Term CSO Control Plan capital projects completed or planned
    - Coordination with Infiltration/Inflow capital projects completed or planned
    - Coordination with City, Town and State street paving projects completed or planned
- Complete "camera on a stick" inspections of all manholes in a sewer system subarea
    - Complete manhole section of inspection forms
        - Maintenance condition of manhole walls, floor and invert
            - Maintenance condition requiring immediate attention
            - Note the presence of significant amounts of fats, oils and grease, roots, and sediment
        - Structural condition of manhole frame, corbel, steps, walls, floor and invert using MACP ratings
            - Structural deficiencies requiring immediate attention
            - 5 – likely to fail in less than 5 years
            - 4 - likely to fail in 5 to 10 years
            - 3 - likely to fail in 10 to 20 years
            - 2 - likely to fail in more than 20 years
            - 1 – failure unlikely
        - Evidence of manhole Infiltration and inflow (I/I)
            - Estimate the rate of manhole I/I
            - Note the presence of significant amounts of I/I
    - Document manhole conditions with digital photographs
- Complete "camera on a stick" inspections of all gravity sewers entering or exiting all manholes inspected in a sewer system subarea
    - Complete gravity sewer section of inspection forms
        - Maintenance condition of gravity sewers visible from manholes
            - Maintenance condition requiring immediate attention
            - Note the presence of significant amounts of fats, oils and grease, roots, and sediment
        - Structural condition of gravity sewers visible from manholes using PACP ratings
            - Structural deficiencies requiring immediate attention
            - 5 – likely to fail in less than 5 years

- 4 - likely to fail in 5 to 10 years
- 3 - likely to fail in 10 to 20 years
- 2 - likely to fail in more than 20 years
- 1 – failure unlikely

- Evidence of gravity sewer I/I visible from manholes
  - Estimate the rate of gravity sewer I/I
  - Note the presence of significant amounts of I/I

- Document gravity sewer conditions visible from manholes with digital photographs
- Enter the manhole and gravity sewer inspection form data into the CMMS

- Identify and clean problem manholes and problem gravity sewers (as defined below) to remove fats, oils and grease, roots, and sediment based on manhole and gravity sewer inspection data
  - Problem manholes include manholes with;
    - Maintenance conditions requiring immediate attention
    - Significant amounts of fats, oils and grease, roots, and sediment
    - Significant amounts of I/I
  - Problem gravity sewers include gravity sewers visible from manholes with;
    - Maintenance conditions requiring immediate attention
    - Significant amounts of fats, oils and grease, roots, and sediment
    - Structural deficiencies requiring immediate attention
    - A structural PACP rating of 5 – likely to fail in less than 5 years
    - Significant amounts of I/I
- Perform internal television inspection of problem gravity sewers to document maintenance issues, structural condition, and the potential for excessive infiltration and inflow
  - Complete television inspection forms using PACP ratings
  - Document gravity sewer conditions with digital videos
  - Enter the television inspection form data into the CMMS
- Assessment of the problem manhole "camera on a stick" inspection data and problem gravity sewer internal television inspection data to develop rehabilitation or replacement recommendations to correct
  - Manhole components with structural deficiencies requiring immediate attention
  - Manhole components with a structural MACP rating of 5 (likely to fail in less than 5 years)
  - Manhole components with significant amounts of I/I
  - Gravity sewers with structural deficiencies requiring immediate attention
  - Gravity sewers with a structural PACP rating of 5 (likely to fail in less than 5 years)
  - Gravity sewers with significant amounts of I/I
- Manhole rehabilitation and replacement alternatives include
  - Cementitious lining
  - Manhole replacement
  - Raising manhole rims
  - Installing bolt down covers

    - Installing manhole liners
- Gravity sewer rehabilitation and replacement alternatives include
    - Cured in place (CIP) lining
    - Testing and sealing pipe joints
    - Root treatment
    - Short liners
    - Sewer replacement
- Assessment of all manhole and gravity sewer inspection data to develop preventative maintenance schedules
    - Perform manhole and gravity sewer inspections again on a frequent basis;
        - Manhole or gravity sewers with maintenance conditions requiring immediate attention
        - Manholes or gravity sewers with significant amounts of fats, oils and grease, roots, and sediment
    - Perform manhole and gravity sewer inspections again in five years;
        - Manholes with a structural MACP rating of 4 – likely to fail in 5 to 10 years
        - Gravity sewers visible from manholes with a structural PACP rating of 4 – likely to fail in 5 to 10 years
    - Perform manhole and gravity sewer inspections again in ten years;
        - Manholes and gravity sewers that have been rehabilitated or replaced
        - Manholes with a structural MACP rating of 3, 2, or 1 – likely to fail in more than 10 years
        - Gravity sewers visible from manholes with a structural PACP rating of 3, 2, or 1 – likely to fail in more than 10 years

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APPENDIX B
OVERFLOW EMERGENCY RESPONSE PLAN
MARCH 8, 2011

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APPENDIX B
OVERFLOW EMERGENCY RESPONSE PLAN
MARCH 8, 2011

EMERGENCY OVERFLOW RESPONSE PLAN GOALS

- This Overflow Emergency Response Plan includes;
  - Overflow response procedures and standard protocols that minimize risk and protect the public health and the environment
  - Overflow notification procedures that identify who needs to be notified (depending on the nature of the overflow) and how to contact those individuals or agencies
  - Overflow reporting procedures that identify which agencies receive reports (depending on the nature of the overflow), the timing of the reports, and the contact information

OVERFLOW EMERGENCY RESPONSE PLAN

- **Before an SSO is reported;**

  - Familiarize collections system personnel with this Overflow Emergency Response Plan that includes SSO response procedures and standard protocols (included in Appendix B-1)
  - Provide collections system personnel with appropriate health and safety training including confined space entry training
  - Train collections system personnel to estimate SSO volumes based on a consistent methodology (included in Appendix B-2)
  - Purchase and maintain appropriate collections system equipment and spare parts
  - Execute appropriate on-call services Agreements with specialty collections system contractors
  - Execute appropriate mutual aid Agreements with local municipal police, fire and publics works departments
  - Establish an SSO reporting hotline for customers
  - Provide hotline personnel with appropriate training regarding information to obtain from callers including;
    - Time and date of the call
    - Specific location of the overflow
    - Description of problem (what is overflowing, extent of spill, if the cause is obvious)

- Time overflow was noticed by the caller
- Caller's name and phone number
- Observations of the caller (odor, duration, back or front of property)
- Other relevant information that will enable the SSO Manager to quickly locate, assess and stop the overflow

- Establish and maintain an up to date SSO notification list (included in Appendix B-3) including;
  - GNHWPCA personnel
  - OMI personnel
  - New Haven, Hamden, East Haven and Woodbridge municipal police and fire personnel
  - State and municipal officials to be notified within 2 hours of an SSO;
    - CT DEP
    - CT Bureau of Aquaculture (if SSO is south of Interstate 95)
    - CT Department of Health
    - New Haven, Hamden, East Haven and Woodbridge Health Departments, as appropriate
    - Regional Health Districts (Quinnipiac Valley and East Shore Health Districts), as appropriate
    - Health Director of contiguous municipalities (West Haven, Orange, Derby, Ansonia, Seymour, Bethany, Cheshire, Wallingford, North Haven, North Branford and Branford), as appropriate
  - Municipal officials in New Haven, Hamden, East Haven and Woodbridge, as appropriate, including but not limited to;
    - Chief Elected Official
    - Board of Alderman President
    - Chief Administrative Officer
    - Chief of Staff
    - Building Official
    - Community Services Administrator
    - Director of Engineering
    - Director of Public Works
    - EOC Deputy Director
  - Utility companies
    - United Illuminating
    - Regional Water Authority
    - Southern Connecticut Gas
  - State and municipal officials to receive a faxed copy of the CT DEP Bypass Report Form (included in Appendix B-4) within 5 days of an SSO;
    - CT DEP
    - CT Bureau of Aquaculture (if SSO is south of Interstate 95)

- Local Health Department

- **Once an SSO is reported;**

  - SSO hotline personnel provide information to the SSO Manager
  - The SSO Manager dispatches collections system personnel with appropriate training and equipment to assess the root cause and severity of the SSO and report back
  - The SSO Manager refers to Appendix B-1 of the Overflow Emergency Response Plan to determine the appropriate SSO response procedures
  - The SSO Manager dispatches additional collections systems personnel and equipment, contacts on-call specialty collections system contractors, and contacts local municipal police, fire and publics works departments, as required, to contain and stop the SSO
  - The SSO Manager notifies appropriate parties, based on the location, root cause and severity of the SSO, that an SSO is in progress

- **After the SSO is stopped;**

  - The SSO Manager notifies the same appropriate parties that the SSO has been stopped
  - The SSO Manager consults with the collections system personnel to understand the root cause of the SSO and to review the estimate of the SSO volume
  - Within 5 days of the SSO, the SSO Manager completes the CT DEP Bypass Report Form and faxes a copy to the appropriate State and municipal officials
  - The SSO Manager enters the CT DEP Bypass Form into the CMMS
  - The SSO Manager recommends manhole or gravity sewer rehabilitation projects to mitigate future SSOs in this location
  - The SSO Manager recommends changes to the preventative maintenance schedules to mitigate future SSOs in this location

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APPENDIX B-1
SSO RESPONSE PROCEDURES
MARCH 8, 2011

SSO RESPONSE PROCEDURES

The following SSO response procedures were developed based on the 2009 EPA Region 1 Template for Developing Sewer Collection System Preventative Maintenance and Sewer Overflow Response Plans.

- BASEMENT BACKUPS
- OVERFLOWING SEWER MANHOLES
- CAVITIES OR DEPRESSIONS IN STREETS AND LAWNS
- SEWER PIPE BREAKS OR COLLAPSES
- PARTIALLY OR TOTALLY BLOCKED SIPHONS
- FORCE MAIN BREAKS
- AIR RELEASE OR VACUUM RELIEF VALVE FAILURES

BASEMENT BACKUPS

SSO RESPONSE PROCEDURES

- The SSO Manager should refer to sewer maps to determine the location and connectivity of sewers and if the area is served by a pump station
- If the area is served by a pump station, the SSO Manager should check to see if an alarm was received from that pump station
- The collection systems personnel should go to the location of the basement backup and identify themselves to the building owner
- The collections system personnel should determine the location of the blockage in the sewer system (if any) by inspecting upstream and downstream manholes (and pump stations, if applicable)
- If there is not a blockage in the sewer system, the collection system personnel should provide the building owner with a copy of the handout (to be developed) which outlines the steps that the building owner needs to take to remove the blockage in their private lateral sewer connection
- If there is a blockage in the sewer system, the collection system personnel should install the proper size sand trap in the invert of the manhole downstream of the blockage
- The collections system personnel should use the necessary equipment (jet flusher or power rodder) to relieve the blockage, if possible
- If successful, the collection systems personnel should remove the sand trap and the debris collected to understand the root cause of the SSO
- If the blockage cannot be cleared using the jet flusher or power rodder, the collection system personnel should set up and maintain bypass pumping equipment until the damaged pipe can be excavated and repaired
- Once the blockage in the sewer has been corrected, the collections system personnel should record the water damage to all items in the building, and the clean and disinfect the building owner's basement

Basement Backups, Minimum Levels of Staffing : 2 people	
Minimum Emergency Equipment	**Specialized Equipment**
• Jet flushing unit and sand trap • Rodding machine with associated cleaning and cutting attachments and sand trap • Standard disinfectants • Safety harness and lifeline • Air blower with hose • Power vacuum • Portable pumps • Portable generators • Safety cones/barricades • Caution tape • Gas meter • Confined space entry tripod and associated equipment • Sand bags	• CCTV camera unit • Truck with hoist • Vactor unit • Power saw (circular) • Pipe cutter (hydraulic) • Floatation booms

OVERFLOWING SEWER MANHOLES

SSO RESPONSE PROCEDURES

- The SSO Manager should refer to sewer maps to determine the location and connectivity of sewers and if the area is served by a pump station
- If the area is served by a pump station, the SSO Manager should check to see if an alarm was received from that pump station
- The collection systems personnel should go to the location of the overflowing manhole to assess the immediate danger to public health or the environment
- If it is imminent that the wastewater will be released into wetlands, receiving waters or a drinking water supply watershed, the collections system personnel should inform the SSO Manager immediately
- The SSO Manager should dispatch additional collections system personnel and equipment, contact on-call specialty collections system contractors, and contact local municipal police, fire and public works departments, as required, to contain the SSO using sand bags and containment booms
- The collections system personnel should determine the location of the blockage in the sewer system by inspecting upstream and downstream manholes (and pump stations, if applicable)
- The collection system personnel should install the proper size sand trap in the invert of the manhole downstream of the blockage
- The collections system personnel should use the necessary equipment (jet flusher or power rodder) to relieve the blockage, if possible
- If successful, the collection systems personnel should remove the sand trap and the debris collected to understand the root cause of the SSO
- If the blockage cannot be cleared using the jet flusher or power rodder, the collection system personnel should set up and maintain bypass pumping equipment until the damaged pipe can be excavated and repaired

Overflowing Sewer Manholes, Minimum Levels of Staffing : 2-3 people	
Minimum Emergency Equipment	**Specialized Equipment**
• Jet flushing unit and sand trap • Rodding machine with associated cleaning and cutting attachments and sand trap • Standard disinfectants • Safety harness and lifeline • Air blower with hose • Power vacuum • Portable pumps • Portable generators • Safety cones/barricades • Caution tape • Gas meter • Confined space entry tripod and associated equipment • Sand bags	• CCTV camera unit • Truck with hoist • Vactor unit • Power saw (circular) • Pipe cutter (hydraulic) • Floatation booms

CAVITIES OR DEPRESSIONS IN STREETS AND LAWNS

SSO RESPONSE PROCEDURES

- The SSO Manager should refer to sewer maps to determine the location and connectivity of sewers
- The collection systems personnel should go to the location of the cavity or depression to assess the immediate danger to public health or the environment
- If it is imminent that the wastewater will be released into wetlands, receiving waters or a drinking water supply watershed, the collections system personnel should inform the SSO Manager immediately
- The SSO Manager should dispatch additional collections system personnel and equipment, contact on-call specialty collections system contractors, and contact local municipal police, fire and public works departments, as required, to contain the SSO using sand bags and containment booms
- The collections system personnel should determine if the cavity or depression is caused by a blockage in the sewer system by inspecting upstream and downstream manholes (and pump stations, if applicable)
- If no evidence of a sewer blockage is found, the collections system personnel should notify the SSO Manager that the cavity or depression is likely caused by a leaking water main or a defect in the storm drain system
- The SSO Manager should contact Regional Water Authority or the local municipal public works department and ask them to take over the repair
- If evidence of a blockage is found, the collection system personnel should install the proper size sand trap in the invert of the manhole downstream of the blockage
- The collections system personnel should use the necessary equipment (jet flusher or power rodder) to relieve the blockage, if possible
- If successful, the collection systems personnel should remove the sand trap and the debris collected to understand the root cause of the SSO
- If the blockage cannot be cleared using the jet flusher or power rodder, the collection system personnel should set up and maintain bypass pumping equipment until the damaged pipe can be excavated and repaired

Cavities or Depressions in Streets and Lawns , Minimum Levels of Staffing: 1 person	
Minimum Emergency Equipment	**Specialized Equipment**
• Safety cones/barricades • Refer to emergency procedures for sewer break if confirmed	• Caution tape

SEWER PIPE BREAKS OR COLLAPSES

SSO RESPONSE PROCEDURES

- The SSO Manager should refer to sewer maps to determine the location and connectivity of sewers
- The collection systems personnel should go to the location of the sewer pipe break or collapse to assess the immediate danger to public health or the environment
- If it is imminent that the wastewater will be released into wetlands, receiving waters or a drinking water supply watershed, the collections system personnel should inform the SSO Manager immediately
- The SSO Manager should dispatch additional collections system personnel and equipment, contact on-call specialty collections system contractors, and contact local municipal police, fire and public works departments, as required, to contain the SSO using sand bags and containment booms
- The collections system personnel should determine the sewer segment with the pipe break or collapse by inspecting upstream and downstream manholes (and pump stations, if applicable)
- The collection system personnel should set up bypass pumping around the sewer segment with the pipe break or collapse as soon as possible
- If necessary, the collection system personnel should perform internal television inspection of the sewer segment from the upstream and downstream manholes to determine the location of the sewer break or collapse
- The collection system personnel should excavate and repair the sewer pipe break or collapse
- To restore the sewer line to full capacity, the collection system personnel should remove any debris that may have entered and accumulated in the sewer pipe downstream from the break or collapse
- The collection system personnel should install the proper size sand trap in the invert of the manhole downstream of the break or collapse
- The collections system personnel should use the necessary equipment (jet flusher or power rodder) to clean the sewer pipe
- The collection systems personnel should remove the sand trap and the debris collected
- Upon confirmation of adequacy of the repair by the SSO Manager, the collection system personnel should backfill the excavation and restore surface conditions to match existing conditions

Sewer Main Breaks or Collapses, Minimum Levels of Staffing: 4 people	
Minimum Emergency Equipment	**Specialized Equipment**
• Portable bypass pumping units • Hoses • Jet flushing unit if available (sand trap) • Standard disinfectants • Safety harness and lifeline if applicable • Air blower with hose • Power vacuum	• CCTV camera unit • Truck with hoist • Vactor unit • Power saw (circular) • Pipe cutter (hydraulic) • Sand trap • Caution tape

PARTIALLY OR TOTALLY BLOCKED SIPHONS

SSO RESPONSE PROCEDURES

- The SSO Manager should refer to sewer maps to determine the location and connectivity of sewers and the number of siphon barrels
- The collection systems personnel should go to the location of the blocked siphon to assess the immediate danger to public health or the environment
- If it is imminent that the wastewater will be released into wetlands, receiving waters or a drinking water supply watershed, the collections system personnel should inform the SSO Manager immediately
- The SSO Manager should dispatch additional collections system personnel and equipment, contact on-call specialty collections system contractors, and contact local municipal police, fire and public works departments, as required, to contain the SSO using sand bags and containment booms
- The collection system personnel should install the proper size sand trap in the invert of the manhole downstream of the blocked siphon
- The collections system personnel should use the necessary equipment (jet flusher or power rodder) to relieve the blockage, if possible
- If successful, the collection systems personnel should remove the sand trap and the debris collected to understand the root cause of the SSO
- If the blockage cannot be cleared using the jet flusher or power rodder, the collection system personnel should set up bypass pumping around the blocked siphon or divert flow to a free flowing siphon barrel, if available, until the damaged pipe can be excavated and repaired

Partially or Totally Blocked Siphons, Minimum Levels of Staffing (people): 4	
Minimum Emergency Equipment	**Specialized Equipment**
• Jet flushing unit if available (sand trap) • Grease solvent, if needed • Standard disinfectants • Safety harness and lifeline if applicable • Air blower with hose • Power vacuum • Portable pumps • Portable generators • Safety cones/barricades • Gas meter-for oxygen deficient, explosive or toxic gases • Confined space entry tripod and associated equipment	• TV camera unit • Truck with hoist • Vactor unit • Caution tape • Sand trap • Floatation booms if necessary • Self Contained Breathing Apparatus (SCBA)

FORCE MAIN BREAKS

SSO RESPONSE PROCEDURES

- The SSO Manager should refer to sewer maps to determine the location and connectivity of sewers and force mains
- The collection systems personnel should go to the location of the force main break to assess the immediate danger to public health or the environment
- If it is imminent that the wastewater will be released into wetlands, receiving waters or a drinking water supply watershed, the collections system personnel should inform the SSO Manager immediately
- The SSO Manager should dispatch additional collections system personnel and equipment, contact on-call specialty collections system contractors, and contact local municipal police, fire and public works departments, as required, to contain the SSO using sand bags and containment booms
- The collection system personnel should set up bypass pumping around the broken force main or utilize a vactor truck or septage hauler to draw down and maintain a low level in the pump station wetwell as soon as possible
- The collection system personnel should drain the broken force main back to the pump station wetwell
- If necessary, the collection system personnel should perform internal television inspection of the broken force main to determine the location of the break
- The collection system personnel should excavate and repair the force main break
- To restore the force main to full capacity, the collection system personnel should remove any debris that may have entered and accumulated in the force main downstream from the break
- The collection system personnel should install the proper size sand trap in the invert of the manhole downstream of the force main break
- The collections system personnel should run the pump in hand manual position to clean the force main
- The collection systems personnel should remove the sand trap and the debris collected
- Upon confirmation of adequacy of the repair by the SSO Manager, the collection system personnel should backfill the excavation and restore surface conditions to match existing conditions

Force Main Breaks, Minimum Levels of Staffing: 4-5 people	
Minimum Emergency Equipment	**Specialized Equipment**
• Portable bypass pumping units • Hoses • Standard disinfectants • Safety harness and lifeline if applicable • Air blower with hose • Power vacuum • Portable generators • Safety cones/barricades • Gas meter-for oxygen deficient, explosive or toxic gases	• CCTV camera unit • Truck wit hoist • Vactor unit or septage hauler • Power saw (circular) • Pipe cutter (hydraulic) • Caution tape • Sand trap • Floatation booms if necessary

• Confined space entry tripod and associated equipment	• Self Contained Breathing Apparatus (SCBA)

AIR RELEASE OR VACUUM RELIEF VALVE FAILURES

SSO RESPONSE PROCEDURES

- The SSO Manager should refer to sewer maps to determine the location and connectivity of sewers and force mains and the location of air release and vacuum relief valves
- The collection systems personnel should go to the location of the valve failure and isolate the valve from the force main by closing the shutoff valve
- If this isolation is unsuccessful, the collection system personnel should assess the immediate danger to public health or the environment
- If it is imminent that the wastewater will be released into wetlands, receiving waters or a drinking water supply watershed, the collections system personnel should inform the SSO Manager immediately
- The SSO Manager should dispatch additional collections system personnel and equipment, contact on-call specialty collections system contractors, and contact local municipal police, fire and public works departments, as required, to contain the SSO using sand bags and containment booms
- The collection system personnel should set up bypass pumping around the broken force main valve or utilize a vactor truck or septage hauler to draw down and maintain a low level in the pump station wetwell as soon as possible
- The collection system personnel should drain the force main back to the pump station wetwell
- The collection system personnel should excavate and repair the broken valve and force main
- To restore the force main to full capacity, the collection system personnel should remove any debris that may have entered and accumulated in the force main downstream from the broken valve
- The collection system personnel should install the proper size sand trap in the invert of the manhole downstream of the force main
- The collections system personnel should run the pump in hand manual position to clean the force main
- The collection systems personnel should remove the sand trap and the debris collected
- Upon confirmation of adequacy of the repair by the SSO Manager, the collection system personnel should backfill the excavation and restore surface conditions to match existing conditions
- If the isolation is successful, collection system personnel should inspect, flush and clean valves in accordance with the specific manufacturer's recommendations

Air Release or Vacuum Relief Valve Failures, Minimum Levels of Staffing: 3 people	
Minimum Emergency Equipment	**Specialized Equipment**
• Hose with quick disconnect fitting and anti siphon device • Blow off discharge hose and waste container • Standard disinfectants • Safety harness and lifeline if applicable	• CCTV camera unit • Truck with hoist • Vactor unit • Power saw (circular) • Pipe cutter (hydraulic)

• Air blower with hose • Power vacuum • Portable pumps • Portable generators • Safety cones/barricades • Gas meter-for oxygen deficient, explosive or toxic gases • Confined space entry tripod and associated equipment	• Caution tape • Self Contained Breathing Apparatus (SCBA)

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY
CAPACITY, MANAGEMENT, OPERATIONS AND MANAGEMENT PLAN

APPENDIX B-2
GUIDANCE ON ESTIMATING SSO VOLUMES
MARCH 8, 2011

GUIDANCE ON ESTIMATING SEWER OVERFLOW VOLUMES

A variety of approaches exist for the estimation of the volume of a sanitary sewer overflow. This appendix documents methods that are often employed. Other methods are also possible. The person preparing the estimate should use the method most appropriate to the SSO using their judgment.

METHOD 1 "VISUAL ESTIMATE"

The volume of very small spills can be estimated by imagining the amount of water that would spill from a 5-gallon bucket or 50 gallon barrel. If the spill is larger than the amount of liquid from a 50 gallon barrel, try to visualize how many barrels the standing water would fill and then multiply by the number of barrel volumes by 50. This method can be useful for contained spills that are not more than a couple of hundred gallons.

METHOD 2 "MEASURED VOLUME"

The volume of some small spills can be estimated using this method if it is not raining. The shape dimensions and depth of the spilled wastewater are needed to use this method. The shape dimensions are used to calculate the area of the spill and the depth calculates the volume.

- Sketch the shape of the contained area of sewage
- Measure or pace off the dimensions and add the dimensions to your sketch
- Measure the depth in several locations and then average the depth for the spill. (If the shape and depth vary, break your sketch into sections and calculate the volume of each by repeating the steps below)
- Convert the dimensions to feet (if they are not in feet to begin with)
- Calculate the area using the following formulas (depending on the shape of the spill):
    - Rectangle Area = length X width
    - Circle Area = diameter X diameter X 0.785
    - Triangle Area = base X height X 0.5
- To get the volume in cubic feet, multiply the area times the average of the depths you measured
- Multiply the volume by 7.5 to convert to gallons

METHOD 3 "DURATION AND FLOW RATE"

Calculating the volume of spills where it is difficult or impossible to measure the area and depth requires a different approach. In this method separate estimates are made of the duration (the elapsed time from the start of the overflow to the time the spill is stopped) of the spill and the flow rate.

Start time can be difficult to establish. Here are two approaches to estimating start time:

- For very large overflows, changes in flow on a downstream flow meter can be used to establish the start time. Typically, the daily flow peaks are "cut off" of flattened by the loss of flow. This can be identified by comparing hourly flow data on the downstream flow meter.
- Conditions at a spill site may change with time. Initially, there will be limited deposits of grease and toilet paper. After a few days to a week, the grease forms a light colored residue. After a few weeks to a month the grease turns dark. In the latter two cases the quantity of toilet paper and other materials of sewage origin increase in amount. These changes with time can be used to estimate the start time in the absence of other information.

Sometimes it is simply not possible to estimate the start time and the date that the overflow was first observed should be used on the form.

End time is usually much easier to establish. Field crews on site observe the "blow down" that occurs when the blockage has been removed. The end can also be observed in downstream flow meter readings.

- Flow Rate:
    - One way to estimate flow rate is to look at changes in flow rates in the downstream flow meters to estimate how much of the flow rate was lost during the spill (this generally only works for large SSOs)
    - A second way to estimate flow rate is to base it on up-stream connections: Once the location of the spill is known, the number of upstream connections can be determined from records or your computerized system. Multiply the number of connections by 200 to 250 gallons per day per connection or 8-10 gallons per hour for each connection (or other flow rates that are consistent with your data for your connections).

Once duration and flow rate have been estimated, the volume of the spill is the product of the duration in hours (or days) times the flow rate in gallons per hour (or gallons per day).

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY
CAPACITY, MANAGEMENT, OPERATIONS AND MANAGEMENT PLAN

APPENDIX B-3
SSO NOTIFICATION LIST
MARCH 8, 2011

GNHWPCA Phone List Alphabetical by Last Name

GNHWPCA Main Number	466-5280		OMI - Main Number	466-5277
Customer Service - Main Number	776-3570		Synagro - Main Number	469-0402
Sewer Emergency Number	466-5260			

GNHWPCA Staff	Ext	Direct Dial	Cell	Location	
Yvonne Bagley	325	466-5278		East St	
Diane Benelli	323	466-4181		East St	
Charlie Biggs	245		410-3488	ESWPAF	
Mike Blake	347	469-8302	980-7254	East St	
Bridget Buckley	321	466-4113		East St	
Pat Canelli		776-3932		Church St	
Betsey Carbone		776-1503		Church St	
Ricardo Ceballos	333	466-4122	494-6801	East St	
Ida Cirillo		776-3945		Church St	
Lou Criscuolo	335	466-4180		East St	
Mark Cunningham	244		401-9701	ESWPAF	
Karen Delucia		777-8366		Church St	
Luigi DiMonaco	329	466-4182	410-7043	East St	
Gail Gentilesco		777-8365		Church St	
Charlene Gettings		776-3713		Church St	
Henry Goetz	341			East St	
Sid Holbrook	326	466-4185	314-2800	East St	
Rick Hurlburt	232	466-5263	376-5831	ESWPAF	
Bill Idarola	242		985-5477	ESWPAF	
Joan Katon		776-3878		Church St	
Azalea Mitch	349	466-5024	980-9195	East St	
Frank Perrotti		776-1502		Church St	
Renee Phillips		776-2255		Church St	
Mario Ricozzi	346	466-5025	859-8308	East St	
Tom Sgroi	328	466-5185	401-9031	East St	
Nicole Simeone		776-3570		Church St	
Deb Torre	327	466-5281		East St	
Gabe Varca	334	466-5265	530-8551	East St	
Sandra Wallace		776-3925		Church St	
Valerie West	324	466-5275		East St	
Jim Zarro	243		509-8532	ESWPAF	
Gary Zrelak	222	466-5285	410-8587	East St/ESWPAF	
Fax - ESWPAF		466-5286		ESWPAF	
Fax - Finance		772-1586		East St	
Fax - Engineering		772-1564		East St	
Fax - Customer Service		776-2196		Church St	
Lobby - East Shore	231			ESWPAF	
Lobby - East St				East St	
Conference Room - East Shore	230			ESWPAF	
Conference Room - East St	330			East St	
Server Room - East Shore	236	469-8305		ESWPAF	
Server Room - East Street	336			East St	

GNHWPCA Phone List Alphabetical by Last Name

OMI Staff	Ext	Direct Dial	Cell	Location	
		Main Number: 466-5277			
Scott Carr	281		619-2006	ESWPAF	
Anthony Fiorillo	289		410-3483	ESWPAF	
Art Hackenberg	284		410-3529	ESWPAF	
Ryan Harrold	283			ESWPAF	
Visha Jesien	277			ESWPAF	
Kiosk - Spare Work Area	271			ESWPAF	
Laboratory	278			ESWPAF	
Michelle Laughlin	270		619-1315	ESWPAF	
Kevin Maltese	279		410-3484	ESWPAF	
Rich Nasse	282		410-3490	ESWPAF	
PCC #1	272	466-5260	410-3530	ESWPAF	
PCC #2	273		410-3541	ESWPAF	
Cail E. Richards	288		410-3557	ESWPAF	
Cheryl Roark	287			ESWPAF	
Jerry Schontag	284		410-3556	ESWPAF	
Shop	280			ESWPAF	
Chris Smith	286		996-3856	ESWPAF	
John Torre	276		996-6745	ESWPAF	
Bob Trelewicz	275			ESWPAF	
Jesse Whittemore	274		410-1629	ESWPAF	
Fax - OMI Office		466-5287			

Synagro Staff	Ext *	Direct Dial	Cell	Location	
		Main Number: 469-0402			
Rob Alshuk	13		494-2655	ESWPAF	
Lynann Conklin	10			ESWPAF	
Incinerator Control Room	14			ESWPAF	
Mike Madden	11		(401) 639-8763	ESWPAF	
Press Control Room	12			ESWPAF	
Fax - Synagro Office		469-0418			

** **Note** : Synagro is not on the GNHWPCA phone system so extension dialing is for Synagro only.*

CITY OF NEW HAVEN - EMERGENCY NOTIFICATIONS

Title Name Police Fire DPW Health WPCA Education Home

TO: Mayor John DeStefano, Jr., Chief James Lewis, Chief Michael Grant, Dick Miller, Bill Quinn, and

FROM: Robert Smuts, Chief Administrative Officer

DATE: January 15, 2008

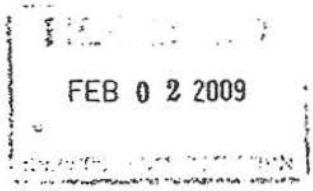
RE: **CITY OF NEW HAVEN - EMERGENCY NOTIFICATIONS**

Please ensure that the individuals listed below are notified as indicated in case of "major which in your opinion warrants immediate notification. Notifications are to be made 24 h

Title	Name	Police	Fire	DPW	Health	
		homicides; terrorist threats	*3 or more alarm fire; terrorist threats*	*weather emer./ bridge closings*	*health emerg./ public fac. closure; terrorist threats*	*n ir fa s*
Mayor	DeStefano	yes	yes	yes	yes	
BOA President	Goldfield	yes	yes	yes	yes	
CAO	Smuts	yes	yes	yes	yes	
Economic Dev. Dir.	Murphy	yes	yes	yes		
Chief of Staff	Matteson	yes	yes	yes	yes	
Deputy CAO	Pugh	no	no	no	no	
Public Info Officer	Mayorga	yes	yes	yes	yes	
Fire Chief	Grant		yes	yes	yes	
Fire Asst. Chief/Ops	Black		yes	yes	yes	
Fire Asst. Chief/Adm.	Dumas		yes	yes	yes	
Police Chief	Lewis	yes				
Police Asst. Chief	Redding	yes				
Police Asst. Chief	Brown					
Police Asst. Chief	Gillespie					
Police Asst. Chief	Reichard					
Health Dir.	Quinn				yes	
Dir. Env. Health	Kowalski				yes	
Building Official	Rizzo		yes	yes		
Chair: Police Comm	Epstein	yes				
Comm Service Adm	Matos			yes	yes	
Engineering	Miller			yes	yes	
DPW Dir.	Prokop			yes	yes	
EOC Deputy Director	Targove	yes	yes	yes	yes	
EOC Deputy Director	Fontana	yes	yes	yes	yes	

cc: Goldfield, Dumas, Black, Redding, Brown, Gillespie, Reichard, Kowalski, Murphy, Rizzo, Matos, Matteo

Bill Quinn, and John Prokop



se of "major" incidents, emergencies or any other incident
e made 24 hours a day.

...lth erg./ blic fac. sure; rorist eats	major incidents at facilities/ spills	School closings/ violent incidents/ major bus or other accidents			
yes	yes	yes	387-6333	946-8200	435-1955
yes	yes	yes	782-2064	xxxxxxx	N/A
yes	yes	yes	623-1967	946-7901	410-8257
			745-5315	946-2366	410-0559
yes	yes	yes	N/A	946-7672	410-1337
no	no	yes	469-0361	946-7903	410-5922
yes	yes	yes	691-1288	946-7660	627-4224
yes	yes		397-0707	946-6300	627-0496
yes	yes		239-5169	946-6218	410-7042
yes	yes		389-4704	946-6219	627-0497
		yes-violence	535-0562	946-6333	410-7990
		yes-violence	239-6582	946-6285	627-2794
			N/A	946-6266	887-6908
			N/A	946-6269	589-5736
			509-9865	946-6294	996-0562
yes	yes		777-5163	946-6978	627-9841
yes	yes		467-2492	946-8173	627-9843
	yes		469-3230	946-8046	410-5169
			397-2299	xxxxxxx	982-4838
yes	yes		946-0677	946-7909	627-4590
yes	yes		397-0542	946-8105	410-6756
yes	yes		468-2528	946-6132	410-0598
yes	yes	yes	467-1330	946-8228	410-8502
yes	yes	yes	799-1895	946-8224	410-0543

Matos, Matteson, Lt. Campion, Sgt. Muller , Targove, Fontana

Revised January 2009

Police, Public Works and Utility Emergency Phone Contacts	
Extreme Emergency Dial 911	
Utility/Municipal Contact	
UI United Illuminating	499-3333
RWA Regional Water Company	562-4020
Southern Conn. Gas Co.	787-6121
NH Fire Dept.	946-6237
New Haven Police	946-6316
NH Public Works	946-8326 or 946-8329
Hamden Fire Dept.	230-4000
Hamden Police Dept.	230-4000
Hamden Public Works	287-2600
East Haven Fire Dept.	468-3840
East Haven Police Dept.	468-3820
East Haven Public Works	468-3327
Woodbridge Police Dept.	387-2511
Woodbridge Fire Dept.	389-3441
Woodbridge Public Works	389-3420

Prepare your own evacuation plan in case authorities can not give you instructions right away. Plan where you will go (relative's home, hotel/motel, etc.), how you will get there and what you will bring.

- Choose multiple destinations in different directions. Remember New Haven is a coastal community and evacuation along the coast to the east and west may not be possible. Get maps in advance and figure out routes and alternate routes.
- If you do not have a car figure out other types of transportation (such as asking to ride with a neighbor or friend). If time allows, consider using other modes of transportation such as the train.
- Make sure everyone in your family knows where you are planning to go in case an emergency makes it impossible for everyone to get back to your home or neighborhood. This should be in your community, but outside your immediate neighborhood. For example, it could be the home of a friend or relative in another part of the City.

IN CASE OF ANY EVACUATION

- If possible, tell your contact person where you are going. Remember to pick a person who doesn't live nearby, in case local phone service is down. Everyone should know to contact this person immediately. Make sure everyone in your family has your contact person's number and email address. Make sure everyone carries coins, a cell phone or a prepaid phone card.

- If instructed to do so, turn off water, electricity and gas at the mains in your home. If you turn off gas service it must be turned back on by a professional.
- Remember to have a Disaster Supply Kit ready and take it with you. Shelters may be able to provide some supplies, but not all. Take cash, identification and prescription medications.

For more information, please contact the City of New Haven Office of Emergency Management , 200 Orange Street, New Haven, CT 06510 203.946.8224 or jmoore@newhavenct.net

Rick Fontana

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY
CAPACITY, MANAGEMENT, OPERATIONS AND MANAGEMENT PLAN

APPENDIX B-4
CT DEP BYPASS REPORT FORM
MARCH 8, 2011

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
WATER BUREAU

BYPASS REPORT FORM

City or Town: _____

Type of Bypass
____ Raw Sewage
____ Disinfected Raw Sewage
____ Partially Treated Sewage
____ Disinfected Partially Treated Sewage
____ Sludge Spill
____ Other: _____

Location of Bypass
____Treatment Plant
____Pump Station
____Manhole, ____Lateral, ____Basement
____Main, ____Private

Cause of Bypass
____ Weather Conditions _____
_____
____ Mechanical Equipment Failure
____ Electric Utility Failure
____ Electrical Equipment Failure
____ Approved Shutdown
____Limited capacity: ____Dry weather
____Wet weather

Blockage of Sewer Line due to:
____Grease, ____ Roots, ____Other:
_____

Exact Location of By-Pass: _____

Date and Time By-Pass was Discovered: _____/_____/_____ ____/____ AM/PM

Date and Time By-Pass was Stopped: _____/_____/_____ ____/____ AM/PM

How By-Pass was Discovered: _____
_____

Quantity/Volume of By-Pass: _____

How Quantity/Volume was Determined: _____
_____

If Equipment Failure, date of last inspection, maintenance or repairs: _____/_____/_____

Receiving Waters (If Applicable)_____

Steps taken to minimize volume and duration of By-Pass:_____
_____

Action taken to eliminate By-Pass:_____
_____

Steps Taken to prevent recurrence of By-Pass:_____
_____

Was area of By-Pass cleaned of debris? _____ Yes _____ No

Method Used:_____

Date of Last Blockage__/ Back up__/ Surcharge ___ at this location: _____/_____/_____

1/09

BYPASS NOTIFICATION LOG

DATE/ TIME

Permittee shall notify DEP within 2 hours of becoming aware of the bypass and shall submit a written report within 5 days.

2 hours notification required

___/___ CT DEP - Iliana Ayala (860) 424-3758 (Primary DEP Contact)
If Iliana Ayala is not available, you **must** call Municipal Facilities Section at number below:

___/___ CT DEP (860) 424-3704 [(860) 424-3338 (DEP Emergency Dispatch) only for after hours] DO NOT LEAVE VOICE MAIL MESSAGES

_____ Name of person contacted

___/___ CT Bureau of Aquaculture (203) 874-0696 (Required only if bypass is below Interstate Route 95)
_____ Name of person contacted.
After hours/weekend must refer to call list provided by Bureau of Aquaculture
DO NOT LEAVE VOICE MAIL MESSAGES

___/___ CT Dept. of Health (860) 509-7333 (Drinking Water Section)
(860) 509-7297 (Recreation Section)
(860) 509-8000 (After hours)
_____ Name of person contacted

___/___ Local Health Department or Regional Health District
_____ Name of person contacted

___/___ Health Director of Contiguous Towns (Coastal Plants Only) or Health Director of Town Downstream (Inland Plants)
_____ Name of person contacted

Final report within 5 days

___/___ Fax to CT DEP, Iliana Ayala (860) 424-4067

___/___ Fax to CT Aquaculture (203) 783-9976 (If south of I-95)

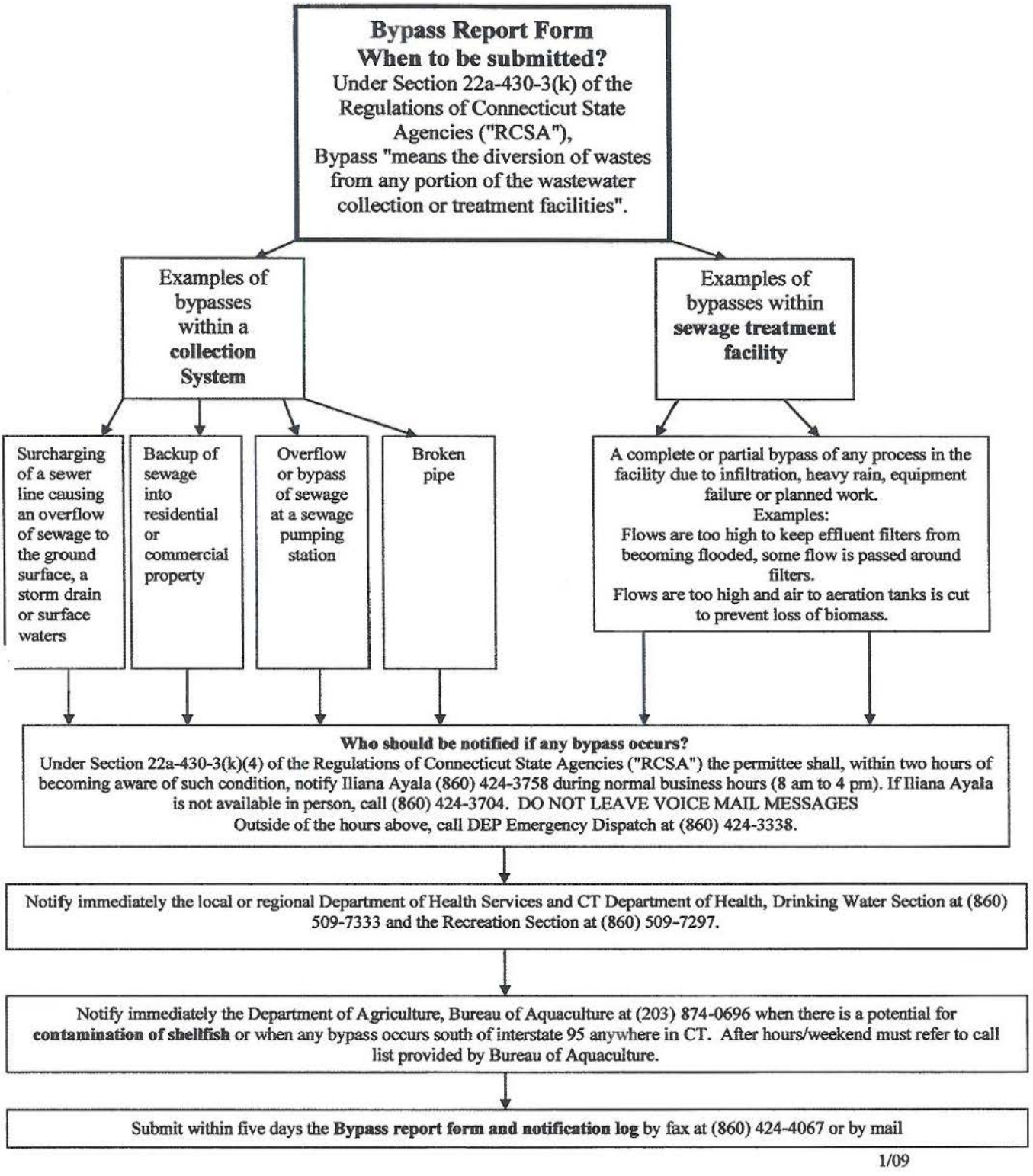
___/___ Fax to Local Health Department or Regional Health District

Report Submitted by: _____ Title: _____

Signature: _____ Date: _____

Phone # _____

Submit Completed Report to either by fax or by mail: State of Connecticut
Department of Environmental Protection
Water Bureau – Attention: Iliana Ayala
79 Elm Street, Hartford, CT 06106-5127 Rev. 1/09


Bypass Report Form
When to be submitted?
Under Section 22a-430-3(k) of the Regulations of Connecticut State Agencies ("RCSA"),
Bypass "means the diversion of wastes from any portion of the wastewater collection or treatment facilities".
Examples of bypasses within a collection System
Examples of bypasses within sewage treatment facility
Surcharging of a sewer line causing an overflow of sewage to the ground surface, a storm drain or surface waters
Backup of sewage into residential or commercial property
Overflow or bypass of sewage at a sewage pumping station
Broken pipe
A complete or partial bypass of any process in the facility due to infiltration, heavy rain, equipment failure or planned work.
Examples:
Flows are too high to keep effluent filters from becoming flooded, some flow is passed around filters.
Flows are too high and air to aeration tanks is cut to prevent loss of biomass.
Who should be notified if any bypass occurs?
Under Section 22a-430-3(k)(4) of the Regulations of Connecticut State Agencies ("RCSA") the permittee shall, within two hours of becoming aware of such condition, notify Iliana Ayala (860) 424-3758 during normal business hours (8 am to 4 pm). If Iliana Ayala is not available in person, call (860) 424-3704. DO NOT LEAVE VOICE MAIL MESSAGES
Outside of the hours above, call DEP Emergency Dispatch at (860) 424-3338.
Notify immediately the local or regional Department of Health Services and CT Department of Health, Drinking Water Section at (860) 509-7333 and the Recreation Section at (860) 509-7297.
Notify immediately the Department of Agriculture, Bureau of Aquaculture at (203) 874-0696 when there is a potential for contamination of shellfish or when any bypass occurs south of interstate 95 anywhere in CT. After hours/weekend must refer to call list provided by Bureau of Aquaculture.
Submit within five days the Bypass report form and notification log by fax at (860) 424-4067 or by mail

1/09